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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 25

Application Number: 09/164,388
Filing Date: September 30, 1998
Appellant(s): HON WAH CHIN

Elise R. Heilbrunn (Reg. No. 42,649)
For Appellant

Examiner's Answer

This is in response to appellant's brief on appeal files 04/02/04.

(1) **Real Party in Interest**

A statement identifying the real party of interest is contained in the brief.

(2) **Related Appeals and Interferences**

A statement identifying the related appeals and interferences, which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) **Status of Claims**

The statement of the status of the claims contained in the brief is correct.

(4) **Status of Amendments**

The appellant's statement of the status of amendments contained in the brief is correct.

(5) **Summary of the Invention**

The summary of the invention contained in the brief is correct.

(6) **Issues**

The appellant's statement of the issues in the brief is correct.

(7) **Grouping of Claims**

Appellant's brief includes a statement that claims of the following groups of claims stand or fall together and proved reasons as set forth in 37 CFR 1.192 (c) (7) and (c) (8).

Group a: claims 1 and 20 stand/fall together and claims 2-9 and 21-27 do not stand/fall together

Group b: claims 45-48 and 52 do not stand/fall together

Group c: claims 10-18 and 28-36 do not stand/fall together

Group f: claims 53-54 stand/fall together

Group g: claims 37-42 do not stand/fall together

Group h: 43 and 49-50 do not stand/fall together

Note: Regarding claims 19 and 51 although arguments seem to be presented on arguments/issue section of page (ii) and page 3, there are not grouped on group of claims section on page 4, that is no groups e-d have been formed. For all intended purposes they will form part of Group a, and will stand/fall together with claims 1 or 20.

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix A to the brief is correct.

(9) Prior art of record

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

ERIMLI et. al.	U.S. Patent No. 6,487,212	11-2002
BARRUCHI et. al.	U.S. Patent No. 5,392,401	02-1995
CLARK	U.S. Patent No. 5,177,480	01-1993

(10) Grounds of Rejection

1.   The following ground(s) of rejection are applicable to the appealed claims: Claims 1-43 and 45-54 are presented for examination.

2.   The following is quotation of 35 U.S.C. §103(a), which forms the basis for all obviousness rejection, set forth in this Office action:

(a) A patent may be not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art of record are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1-42 are rejected under 35 U.S.C. §103(a) as being unpatentable over ERIMLI et. al. U.S. Patent No. 6,487,212 in view of BARRUCHI et. al. U.S. Patent No. 5,392,401 (referred to as Erimli and Barruchi hereafter).

Regarding claims 1, Erimli teaches features substantially as claimed, a system/method including;

a switch (12) (router) for routing data packets (col 4/lines 21-24, 29-32, routing: col 5/lines 27-29), the router including;

an inbound (receiving) port and an outbound (sending) port (col 2/lines 52-57, col 5/lines 11-20, col 6/lines 10-16), a memory (col 5/lines 32-40), and a processor (CPU) (col 7/lines 21-23);

the receiving interface (18) (controller) being adapted for receiving a (inbound) packet at the receiving (inbound) port (16) (col 5/lines 11-23), the method comprising:

providing a plurality of input (inbound) queues (52) for the inbound port (col 6/lines 1-16, col 7/lines 35-41);

receiving an inbound packet at the inbound port (col 7/lines 35-41);

storing the received (inbound) packet in the selected one of the plurality of inbound queues (52) (col 6/lines 10-16); and

determining when one of the plurality of inbound queues storing a plurality of packets is ready to be moved to an entry in an outbound queue (col 22/lines 37-54, col 23/lines 24-35, 54-56) associated with the outbound port (col 10/lines 46-56, col 11/lines 6-9, 20-23);

the outbound queue being capable of storing a reference (col 14/lines 14-20) to a plurality of inbound queues (col 8/lines 1-8, 16-22, col 22/lines 37-41) individually (col 9/lines 28-37, 61-63, pointer as an entry) stored in a different one of a plurality of entries in the outbound queue (col 23/lines 22-27);

conventionally each of the plurality of inbound queues storing a plurality of packets to be separately transmitted (read) (col 10/lines 10-11);

although prior art teaches classifying one of the pluralities of inbound queues according to a priority (sorting criteria) and classifying the received packets according to a (destination or type criteria) packet sorting criteria; it does not explicitly teach selecting one of the plurality of inbound queues according to packet sorting criteria;

Barucchi teaches a system/method related to a switching device for routing data packets (abstract), teaching a routing device (col 3/lines 42-48) configured for selecting one of a plurality of inbound queue according to a packet destination criteria (packet sorting criteria) (prior art: col 1/lines 25-37, select inbound queue according to data packet destination, col 5/lines 4-22, 51-54, select inbound queue according to the data packet source, col 7/lines 31-34, Fig. 2, selection means 32) storing the inbound packet in the selected one of the plurality of the inbound queue (i.e. allocating "classifying or sorting");

It would have been obvious to one ordinary skilled in the art at the time the invention was made to include Barucchi's teaches for classifying the received packet with a selected one of the plurality of inbound queues according to a packet sorting criteria for storing the inbound packet in the selected one of

the plurality of inbound queues and transferring to received packet to an outbound queue associated with the outbound port according to said packet sorting criteria for its destination, as taught by Barucchi. Motivation would be to optimize the performance of a switching device for simultaneously routing data from outbound queues to their respective destinations according to selected inbound and outbound queues.

Regarding claim 2, raising (asserting) an indication (interrupt) when it is determined that one of the plurality of inbound queues is ready to be moved to an outbound queue (Erimli: col 24/lines 59-col 25/line 22).

Regarding claim 3, sorting the inbound packet into one of the plurality of inbound queues according to the packet sorting data from data obtained from the inbound packet associated with said selected criteria (Barucchi: col 1/lines 25-37, col 5/lines 4-22, 51-54, col 7/lines 31-34, Fig. 2).

Regarding claim 4, a transferring the selected one of the plurality of inbound queues storing a plurality of packets to the outbound queue associated with the outbound port, outbound queue including a reference to the selected inbound queue storing a plurality of packets is stored in a single one of a plurality of entries in the outbound queue (Erimli: moving queue: col 22/lines 37-54, col 23/lines 24-35, 54-56, outbound queue/port: col 10/lines 46-56, col 11/lines 6-14, 20-23, pointer: col 14/lines 14-20, inbound queues: col 8/lines 1-8, 16-22, col 22/lines 37-41: individually entry: col 9/lines 28-37, 61-63, pointer as an entry stored in a different one of a plurality of entries in the outbound queue col 23/lines 22-27).

Regarding claim 5, obtaining an available packet buffer from a free pool of available packet buffers (free buffer pool 104: col 7/lines 23-28); placing the inbound packet in the packet buffer for storing the packet buffer in the inbound queue (Erimli: col 7/lines 52-65).

Regarding claim 6, determining whether a number of packets in one of the plurality of inbound queues exceeds a maximum number of packets (Erimli: col 24/lines 24-32).

Regarding claim 7, determining whether a number of bytes in one of the plurality of inbound queues exceeds a maximum number of bytes (Erimli: col 24/lines 24-32).

Regarding claim 8, determining whether a free pool of available memory has been depleted (Erimli: col 21/lines 19-23).

Regarding claim 9, determining whether a maximum time limit has been exceeded (Erimli: col 15/lines 1-4).

Regarding claim 10, this claim comprises features substantially the same as those discussed on claim 1, same rationale of rejection is applicable, and further limitations include:

an outbound controller for the router being adapted for forwarding packets at the outbound port (Erimli: outbound interface (18) (controller) and output port (16): col 6/lines 11-19);

transmit (outbound) queue (54) associated with the outbound port (Erimli: outbound queue (54): col 6/line 10-16, outbound queue (74), col 7/lines 25-26, output port, col 5/lines 19-20, 26-33, outbound queue of the outbound port: col 22/lines 325-41);

an outbound queue storing a plurality of inbound queues (Erimli: col 2/lines 21-28, 52-62);

receiving a indication or signal (notification) to handle an inbound queue being ready to be moved to an outbound queue (Erimli: col 24/lines 59-col 25/line 22);

move (transferring) the inbound queue storing a plurality of packets to an entry in the outbound queue associated with the outbound port such that a reference to the inbound queue storing a plurality of packets is stored in one of a plurality of entries in the outbound queue (Erimli: inbound move to outbound queue: col 22/lines 37-54, col 23/lines 24-35, 54-56, col 10/lines 46-56, col 11/lines 6-9, 20-23, outbound queue storing pointer, col 14/lines 14-20, col 8/lines 1-8, 16-22, col 22/lines 37-41, individually col 9/lines 28-37, 61-63, pointer as an entry stored in a different one of a plurality of entries in the outbound queue col 23/lines 22-27); and

repeating the receiving and transferring steps for the plurality of inbound queues (Erimli: col 9/lines 61-63, col 10/lines 10-11, repeat transfer next: col 19/lines 8-10).

Regarding claim 11, receiving the signal or indication (notification) from a processor to move the inbound queue (Erimli: col 24/lines 59-col 25/line 22).

Regarding claim 12 transmitting packets stored in the outbound queue (Erimli: inbound move to outbound queue: col 22/lines 37-54, col 23/lines 24-35, 54-56, col 10/lines 46-56, col 11/lines 6-9, 20-23, outbound queue storing pointer, col 14/lines 14-20, col 8/lines 1-8, 16-22, col 22/lines 37-41, individually col 9/lines 28-37, 61-63.

Regarding claim 13, selectively discarding packets stored in the outbound queue (Erimli: discarding: col 12/lines 15-31, discarded: col 1/lines 56-61).

Regarding claim 14, obtaining a next one of the plurality of inbound queues stored in the outbound queue (Erimli: transmitting selected packets stored in the next one of the plurality of inbound queues (col 19/lines 8-10) and releasing memory associated with the next one of the plurality of inbound queues (Erimli: col 19/lines 10-19).

Regarding claim 15, storing the released memory in a free pool of available packet buffers (Erimli: release: col 25/lines 7-12, return buffer to the free pool: col 17/lines 41-50).

Regarding claim 16, forming a new inbound queue to be used by an inbound controller (Erimli: clear queue entries: col 17/lines 14-20, release inbound queue: col 8/lines 39-45).

Regarding claim 17, forming a queue to be used by the outbound controller during bi-directional Operation (Erimli: col 15/lines 50-col 16/line 2).

Regarding claim 18, this claim comprises limitation(s) discussed on claim 4, same rationale of rejection is applicable, further limitation includes, ascertaining a priority of the inbound queue (Erimli: input queue: priority level: col 2/lines 21-28).

Regarding claim 19, this claim comprises combined features discussed on claims 1 and 10, same rationale of rejection is applicable.

Regarding claim 20, this claim comprises apparatuses associated with and/or to perform each of the functions of the method claims 1 and 10, same rationale of rejection is applicable.

Regarding claims 21-24, these claims comprise the apparatuses (e.g. modules) adapted to perform each of the functions of the method claims 1-2, 5, and 7 respectively, same rationale of rejection is applicable.
Regarding claim 25, determining whether a number of bytes in one of the plurality of inbound queues exceed a maximum number of bytes (Erimli: col 25/lines 1-2, col 23/lines 24-40).

Regarding claims 26-27, these claims comprise the apparatuses (e.g. modules) adapted to perform each of the functions of the method claims 8 and 9 respectively, same rationale of rejection is applicable

Regarding claim 28, this claim comprise the apparatuses (e.g. modules) adapted to perform each of the functions of the method claims 1-2, 10, 19, and apparatus claim 20, same rationale of rejection is applicable.

Regarding claim 29, this claim is substantially the same as claims 2 & 10-11, wherein the signal or indication from processor is further called "notification", same rationale of rejection is applicable.

Regarding claims 30-36, these claims comprise the apparatuses (e.g. modules) adapted to perform each functions of the method claims 12-18 respectively, same rationale of rejection is applicable.

Regarding claim 37, this claim comprises the interconnected apparatuses (e.g. modules) adapted to perform each of the functions of the method claims 1, 10, 19, and apparatus claim 20, same rationale of rejection is applicable.

Regarding claim 38, this claim comprises the interconnected apparatuses (e.g. modules) adapted to perform each of the functions of the method claims 1, 10, 19, and apparatus claim 20, same rationale of rejection is applicable.

Regarding claim 39, this claim comprises the interconnected apparatuses (e.g. modules) adapted to perform each of the functions of the method claims 1, 10, 19, and apparatus claim 20, same rationale of rejection is applicable.

Regarding claim 40, releasing selected packet buffers associated with packets stored at the one of the plurality of outbound queues (Erimli: col 15/lines 50-col 16/line 2).

Regarding claim 41, free pool of available packet buffers and releasing the selected packet buffers into the free pool (Erimli: col 15/line 50-col 16/line 2).

Regarding claim 42, providing a new inbound queue of selected one of the plurality of inbound queues according to packet sorting criteria for the inbound controller use or reuse (Erimli: clear queue entries: col 17/lines 14-20, release inbound queue: col 8/lines 39-45, Barucchi: selecting one of a plurality of inbound queue col 1/lines 25-37, select inbound queue according to data packet destination, col 5/lines 4-22, 51-54).

5.   Claims 43, and 45-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erimli in view of Barucchi in further view of Clark U.S. Patent No. 5,177,480

Regarding claim 43, this claim comprises substantially the same features discussed on the method claims 1, 10, 19, and the apparatus claims 20, 28, 37-38, same rationale of rejection is applicable, further however, the prior art does not explicitly teach encrypting the one of the plurality of inbound queues to provide an encrypted inbound queue to the outbound controller for transmission;

        Clark discusses as prior art encryption mechanisms, which encrypt an entire buffer (queue or set data packets) (col 1/lines 34-col 2/line 10);

        It would have been obvious to one ordinary skilled in the art at the time the invention was made to include means for encrypting an entire buffer as discussed by Clark, to enable the encryption to one of the plurality of inbound queues to provide an encrypted inbound queue to the outbound controller for transmission, further processing the encrypted inbound queue in the same manner the inbound queue was processed in the above-discussed system/method, motivation as indicated by Clark is utilized in compression algorithms before transmission steps, used to reduce significant overhead associated with the data and reducing delay.

Claim 44, cancelled.

Regarding claim 45, this claim contains limitation(s) substantially the same as those discussed on claims 1, 2 and 4, same rationale of rejection is applicable.

Regarding claim 46-48, this claim contains limitation(s) substantially the same as those discussed on claims 1-2, 4, 10-11 & 18, same rationale of rejection is applicable.

Regarding claim 49-50, the inbound queue stores therein a plurality of packets (Erimli: col 5/lines 11-23), and wherein the encryption box encrypts an entire queue (Clark: col 1/line 34-col 2/line 10).

Regarding claim 51, this claim contains limitation(s) substantially the same as those discussed on claims 4, 10, 11 and 22, same rationale of rejection is applicable.

Regarding claim 52, this claim contains limitation(s) substantially the same as those discussed on claim 1, same rationale of rejection is applicable.

Regarding claim 53, this claim comprises the apparatus, i.e. the computer-readable medium storing thereon computer-readable instructions for performing the method claims 1, 10, 19, and apparatus claims 20, 28, 37-38, & 43, same rationale of rejection is applicable.

Regarding clam 54, this claim comprises the apparatus, for routing (forwarding) a packet in a router of claims 1, 10, 19-20, 28, 37-38 & 43, including the means for performing functions thereof, same rationale of rejection is applicable.

(11) Response to Arguments

1.   Regarding group/issue A, the combination of the Erimli and Barruchi references neither disclose the invention of claims 1-9, and 20-27. Specifically, on page 7, it is argued that Erimli does not teach limitation of <u>claim 1</u>, an outbound queue of storing a plurality of inbound queues because the reference teaches storing in an outbound queue a plurality of <u>packets</u> rather than a plurality of <u>queues</u>.

        In response to the above-mentioned argument, appellant's interpretation of the prior art has been fully considered. However, it is respectfully noted that according to applicant's specification, a "set of packets" is exemplified as a "queue of packets", more particularly, "each inbound queue corresponds to a set of packets…"see page 9, lines 10-20. Specification describes where the <u>outbound queue</u> includes a <u>FIFO</u> see page 10, lines 19-20, where with respect to Figure 4 it is described that <u>each queue</u> (402) of includes a <u>number of packets</u> (406) (see page 10, lines 24-29). More importantly, the claim 1 recites, "determining when one inbound queue storing a plurality of <u>packets</u> is ready to be <u>moved to</u> an entry in <u>an outbound queue</u>". Hence, what is stored are packets not queues according to the claim. Arguments that the claimed outbound queue stores <u>queues</u> moved therein <u>not packets</u> are not persuasive.

2.   Regarding group/issue A, the combination of the Erimli and Barruchi references it is argued that neither disclose the invention of claims 1-9, and 20-27. Specifically, on page 7, it is argued that Erimli does not teach limitation of <u>claim 1</u>, "queuing queues as entries", because although the Erimli reference

discloses where the output structure is not limited to frame pointers as entries it does not teach "queuing queues (or queue pointers) as entries".

In response to the above-mentioned argument, appellants interpretation of the claim limitation is noted, however, claim 1 limitation recites, "the outbound queue being capable of storing a reference to each of a multiplicity of inbound queues". That is, an outbound queue storing a reference to in an inbound queue. Erimli teaches storing an inbound frame packet received at an inbound port in an inbound queue (column 7, lines 40-50), a pointer referencing the location at which the frame is stored in the inbound queue (column 7, lines 52-56), the pointer is stored into a particular output queue (or queued) including placing the pointer on the to of the appropriate output queue (column 8, lines 1-21), and further including storing a frame pointer in an entry of an output queue (column 9, lines 28-37). Erimli teaches where output queues provide storage for frame pointers when they are queued for transmission, where queuing takes the form of pointers stored into various output queue (column 10, lines 46-56).

Arguments that the reference teaches storing pointers in an outbound queue but does not teach queuing queues are not persuasive.

3.   Regarding group/issue A, the combination of the Erimli and Barruchi references neither disclose the invention of claims 1-9, and 20-27. Specifically, on pages 7-10, it is argued that Erimli does not teach limitation of claim 4, transferring one selected inbound queue storing a plurality of packets to an outbound queue, because the Erimli reference discloses enqueuing a single frame and therefore a single entry in the inbound queue onto an outbound queue.

In response to the above-mentioned argument, appellant's interpretation of the reference is noted. However, the Erimli reference teaches a plurality of output queues at which entries from an input queue are received (column 2, lines 57-59); further teaching the transformation of single events (placing an entry into the output queue) associated with traditional queuing where entries are taken one by one, into a burst event (see column 9, lines 61-67) in which data is accumulated in the inbound queue to then burst, a number of bytes of information at a time, disclosing that this is in contrast to conventional queuing structures in which single entries are written and read to and from the queue (column 10, lines 1-11).

Arguments that Erimli teaches transferring a single entry in the inbound queue onto an outbound queue is not persuasive.

4.   Regarding group/issue A, the combination of the Erimli and Barruchi references neither disclose the invention of claims 1-9, and 20-27. Specifically, it is argued the cited references neither disclose nor

suggest the problem or limitations of the systems in which per-packet processing is performed by a router, and reduce CPU overhead in the forwarding process by reducing per-packet processing.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "per-packet processing is performed by a router, and further fail to achieve the desired result to reduce CPU overhead in the forwarding process by reducing per-packet processing" nor "enqueuing an entire queue of packets") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

5.   Regarding group/issue A, the combination of the Erimli and Barruchi references neither disclose the invention of claims 1-9, and 20-27. Specifically, it is argued (on pages 9-10) that because the combination of the cited references would merely achieve a standard prior art system in which packets (frames) are transferred individually to an outbound queue, thereby the independent claim(s) are patentable over the cited references. Furthermore, appellant indicates that dependent claims have further limitations proceeding to recite these, yet he/she fails to set forth a corresponding argument, merely reciting what the claims recite is not an argument. (see 37 CFR 1.192 (7-8) of MPEP 1206). Appellant further indicates that since claims 2-9 and 21-27 each depend from independent claims 1 or 20, they are patentable over the cited references for the same reasons.

In response to the above-mentioned remarks, it is noted that with respect to the presented arguments directed to the limitation(s) of claim 1 or 20, these have fully been considered, however it is found that the references teaches the argued claim limitation(s) of group (a) as discussed above. In the Grouping of the claims section (on page 4 of brief), appellant indicated that claims 2-9 and 21-17 will be argued independently, this is not reflected in the argument section. Hence, since the patentability of claims 2-9 and 21-27 set forth by appellant is based on the patentability of claim 1 or 20 of group (a) of arguments, claims 2-9 and 21-17 are not patentable for the same reasons claim 1 or 20 are not patentable over the applied art.

6.   Regarding group/issue B, the combination of the Erimli, Barruchi and Clark references it is argued that neither disclose the invention of claims 45-48 and 52. Specifically, appellant indicates (on page 11) that claims 45-48 are allegedly allowable for at least reasons set forth in group/issue (a), i.e. arguments present for claims 1-9 and 20-27.

In response to the above-mentioned argument, it is noted that with respect to the presented arguments directed to the limitation(s) of claim 1or 20, these have fully been considered, however it is found that the references teaches the argued claim limitation(s) of group (a) as discussed above. In the Grouping of the claims section (on page 4 of brief), appellant indicated that each claims 45-48 and 52 will be argued independently, this is not reflected in the argument section. Hence, since the patentability of claims 45-48 and 52 set forth by appellant is based on the patentability of claim 1 or 20 of group (a) of arguments, claims 45-48 and 52 are not patentable for the same reasons claim 1 or 20 are not patentable over the applied prior art.

7.   Regarding group/issue B, the combination of the Erimli, Barruchi and Clark references it is argued that neither disclose the invention of claims 45-48 and 52. Specifically, applicant indicates (on page 11) that the Erimli and Barucchi do not teach transferring an entire inbound queue to an entry in an outbound queue.

In response to the above-mentioned argument, appellant's interpretation of the claim limitation(s) has been noted and fully considered. However, claim (45) recites, transferring one inbound queue to an entry in the outbound queue. The applied Erimli reference teaches a queue that queues entries and has a plurality of write side and a plurality of read sides. The queue (write) side forms a queue input at which entries to the queue are received, the plurality of queue read sides form a queue output at which entries from the queue write side are received, queued and output from the queue. Control logic directs the entries from the queue write side (inbound or input queue) to one of the queue read sides (outbound or output queue) based on a priority criteria (column 2, lines 21-34, 51-column 3, line 3). Entries exiting the queue write side (input or inbound) are direct to one of a plurality of queue read sides (output or outbound) of the queue based on the a priority criteria of the entries (column 3, lines 18-21). The control logic transfers the one or more entries directly from the output queue write side (inbound) to output queue read side (outbound)(column 9, lines 38-46).

Arguments that Erimli does not transfer an inbound queue to an entry in an outbound queue are not persuasive. Claims 45-48 and 52 stand unpatentable over the prior art of record, because the prior art teaches argued feature in regarding claims 45-48 and 52 upon which applicant basis patentability. Claims 45-48 and 52 do fall together because each claim has not been argued independently as noted on page 4 of brief.

8.   Regarding group/issue C, the combination of the Erimli, and Barruchi references it is argued that neither disclose the invention of claims 10-18 and 28-36. Specifically, it is argued (on page 12) that the

Erimli reference does not teach limitation of claim 10, an outbound queue capable of storing a plurality of inbound queues based on appellant's characterization of the prior art set forth the in group (a) on page 7 of brief, and further particularly because Erimli teaches away from transferring a queue of packets to a single entry in an outbound queue.

In response to the above-mentioned argument, noted characterization of the prior art's teachings have been fully considered. However, claim limitation argued in claim 10 recites, an outbound queue being capable of storing a plurality of inbound queues. The Erimli reference teaches a plurality of write side and a plurality of read sides queues that queues entries, wherein the queue (write) side forms a queue input at which entries to the queue are received, and the plurality of queue read sides form a queue output at which entries from the queue write side are received, queued and output from the queue; wherein logic directs the entries from the queue write side to one of the queue read sides based on a priority criteria (column 2, lines 21-34, 51-column 3, line 3). Entries exiting the queue write side (input or inbound) are direct to one of a plurality of queue read sides (output or outbound) of the queue based on the a priority criteria of the entries (column 3, lines 18-21). The control logic transfers the one or more entries directly from the output queue write side (inbound) to output queue read side (outbound)(column 9, lines 38-46).

Arguments regarding claim 10 that the reference fails to teach transferring an inbound queue storing a plurality of packets to a single entry in an outbound queue are not persuasive.

9.   Regarding group/issue C, the combination of the Erimli, and Barruchi references it is argued that neither disclose the invention of claims 10-18 and 28-36. Specifically, it is argued (on page 12) that the Erimli reference does not teach limitation of claim 28, transferring a queue of packets to a single entry in an outbound queue.

In response to the above-mentioned argument, it is noted that this argument has been fully considered. However, this argument with respect to claim 28 is substantially the same as argument with respect to claim 1 or 20 presented on group (a) above. Hence, the same rebuttal and/or rationale of rejection and passages in the art discussed for set of claims (1, 20) and claims (1-9, and 20-27) group a, and claims (10-18 and 28-36) group c, discussed in detail above are equally applicable.

Arguments regarding claim 28, substantially the same arguments with respect to claim 10 and claim 4, specifically, that the reference fails to teach transferring the inbound queue storing a plurality of packets to a single entry in the outbound queue are not persuasive.

10.   Regarding group/issue C, the combination of Erimli and Barruchi references it is argued that neither disclose the invention of claims 11-18 and 29-36. Specifically, applicant indicates (on page 15)

that claims 11-18 and 29-36 are allegedly patentable for at least reasons set forth on group (c), i.e. arguments present for claims ind ependent claims 10 or 18.

In response to the above-mentioned argument, it is noted that with respect to the presented arguments directed to the limitation(s) of claim 10-18 and 28-36, these have fully been considered, however it is found that the references teaches the argued claim limitation(s) of group (c) as discussed above. In the Grouping of the claims group c (on page 4 of brief), applicant indicated that each claims 10-18 and 28-36 will be argued independently, this is not reflected in the argument section.

Hence, since the patentability of claims 10-18 and 28-36 set forth by appellant is based on the patentability of claim 1 or 20 of group (a) of arguments, claims 10-18 and 28-36 are not patentable for the same reasons claim 10 is not patentable over the applied prior art.

11.   ₋Regarding argument/issue D of group A, the combination of Erimli, Barucchi and Clark reference, it is argued that neither disclose the invention of claim 51. Specifically, it is argued (on page 15) that claim 15 is allegedly allowable for arguments presented on group (c) directed to claims 10-18 and 28-36. Further limitations associated with claims 11-12, 14-17, 29-30, and 32-35 are recited, yet appellant fails to set forth a corresponding argument, merely reciting what the claims recite is not an argument. (see 37 CFR 1.192 (7-8) of MPEP 1206).

In response to the above-mentioned argument, that claim 15 is allegedly allowable for reasons presented on group (c), it is noted with respect to the presented arguments directed to the limitations of claims 10-18 and 28-36, these have been fully considered however it is found that the references teaches the argued claim limitation(s) of group (c) as discussed above.

Hence, since the patentability of claim 51 set forth by appellant is based on the patentability of claim 10-18 and 28-36 as argued on group (c), claim 51 are not patentable for the same reasons claim 10 is not patentable over the applied prior art. Grouping of the claims (on page 4 of brief), makes no mentioned of issues/arguments of arguments (d). Thereby, claim 51 being dependent on claim 10 falls together with the group of claims 10-18 and 28-36 of group (c), or may particularly fall with claim 10 from which it is dependent, claim 51 was not argued independently, thereby it is not independently patentable.

12.   Regarding argument/issue E of group A, the combination of the Erimli, and Barucchi references, it is argued that neither disclose the invention of claim 19. Specifically, it is argued (on page 16) that claim 19 is allowable for arguments presented on group (a) directed to claims 1-9 and 20-27. Argument

and/or remarks presented on pages 17-18 are identical to those presented on pages 13-14, with respect to claims 10-18 and 28-36 group (c), pointing out the single same argument discussed therein.

In response to the above-mentioned argument, that claim 19 is allegedly allowable for reasons presented on group or issue (a or c), it is noted that arguments presented with respect to claims 10-18 and 28-36 have been fully considered but not rendered persuasive, thereby claim 19 is unpatentable for at least the same reasons presented in respective group or issue (a) or (c). Grouping of the claims on page 4, makes no mentioned of issues/arguments of group (e). Thereby, claim 19 an independent on claim falls together with the group of claims 10-18 and 28-36 of group c, or may particularly fall with claim 10 from which alleged argued patentability is based thereon, and thereby not patentable for the same reasons set above.

13.   Regarding group/issue F, the combination of the Erimli, Barucchi and Clark references, it is argued that neither disclose the invention of claims 53 and 54. Specifically, it is argued (on page 19) that claims 53 and 54 are merely the computer-readable medium and apparatus claim, respectively, corresponding to claim 19, discussed above on issue (e), thereby allegedly patentable for reasons presented on issue (e), which makes reference to reasons presented on group (a) or (c).

In response to the above-mentioned argument, that claims 53-54 are allegedly allowable for reasons presented on group (a or c), it is noted that arguments presented with respect to claims 10-18 and 28-36 on group (c) have been fully considered but not rendered persuasive, thereby claims 53-54 are unpatentable for at least the same reasons presented in respective group (a) or (c). Grouping of the claims on page 4, indicated that these claims fall or stand as a group. Thereby, claims 53-54 falls together with the group of claims 10-18 and 28-36 of group (a) or (c) on which argued patentability is based.

14.   Regarding group/issue G, the combination of the Erimli, and Barucchi references, it is argued that neither disclose the invention of claims 37-42. Specifically, it is argued on pages 19-21 that claims 37-42 are allowable for arguments presented on group (a) directed to claims 1-9 and 20-27. These pages merely recite the claims of this group and further present arguments and/or remarks (e.g. on page 20) identical to those presented on the second paragraph of pages 13-14, with respect to claims 10-18 and 28-36 group (c), pointing out the single same argument discussed therein.

In response to the above-mentioned argument, that claims 37-42 are allegedly patentable for reasons presented on group (a or c), it is noted that arguments presented with respect to claims 10-18 and 28-36 on group (c) have been fully considered but not rendered persuasive, thereby claims 37-42 are unpatentable for at least the same reasons presented in respective group (a) or (c). Grouping of the claims

on page 4, indicated that these claims do not fall or stand together. Thereby, claims 37-42 falls together with the group of claims 10-18 and 28-36 of group (c) or (a) on which argued patentability is based since they are not argued individually.

15.   Regarding group/issue H, the combination of the Erimli, Barucchi and Clark references, it is argued that neither disclose the invention of claims 43, and 49-50. Specifically, it is argued (on page 23) that neither the references teach enabling CPU overhead to be reduced in the forwarding process through the handling of queues of packets such that an inbound queue of packets is transferred to a single entry in an outbound queue (same argument presented on page 9 with respect to claim 4, on page 14 with respect to claim 28 and on page 21 with respect to claims 37-42).

In response to the above-mentioned argument, that claims 43 and 49-50 are allegedly patentable for reasons presented on group/issue (c), it is noted that arguments presented with respect to claims 10-18 and 28-36 on group/issue (c) or with respect to claims 1-9 and 20-27 on group/issue (a) have been fully considered but not rendered persuasive, thereby claims 43 and 49-50 are unpatentable for at least the same reasons presented in respective group/issue (a) or (c). Grouping of the claims on page 4, indicated that these claims do not fall or stand together. Thereby, claims 43 and 49-50 falls together with the group of claims 10-18 and 28-36 of group/issue (c) or claims 1-9 and 20-27 on group/issue (a) on which argued patentability is based since they are not argued individually.

16.   Regarding group/issue H, the combination of the Erimli, Barucchi and Clark references, it is argued that neither disclose the invention of claims 43, and 49-50. Specifically, it is argued (on page 23) additionally that neither the references teach claim (43) limitation, i.e. the inbound queue for which a reference is stored in the outbound queue is encrypted prior to storing the reference in the entry of the outbound queue, because with respect to the Clark reference a buffer cannot be interpreted as a set of data packets.

In response to the above-mentioned argument, applicant's interpretation of the prior art is noted. However, as initially discussed above, according to applicant's specification, a "set of packets" is exemplified as a "queue of packets", more particularly, "Each inbound queue corresponds to a set of packets..."(see page 9, lines 10-20). Furthermore, specification describes where the outbound queue includes a FIFO (see page 10, lines 19-20), and with respect to Figure 4 it is described where each queue (402) of includes a number of packets (406) (see page 10, lines 24-29). Thereby, the claim term inbound or outbound "queue" given the broadest reasonable interpretation in light of the specification does not exclude a buffer.

17.   Appellant's arguments have been fully considered but not rendered persuasive.

(12)   *Conclusion*

The ultimate determination of patentability must be based on consideration of the entire record, by a preponderance of evidence, with due consideration to the persuasiveness of any arguments and any secondary evidence. In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). The submission of objective evidence of patentability does not mandate a conclusion of patentability in and of itself. In re Chupp, 816 F.2d 643, 2 USPQ2d 1437 (Fed. Cir. 1987). Facts established by rebuttal evidence must be evaluated along with the facts on which the conclusion of a prima facie case was reached, not against the conclusion itself. In re Eli Lilly, 902 F.2d 943, 14 USPQ2d 1741 (Fed. Cir. 1990). In other words, each piece of rebuttal evidence should not be evaluated for its ability to knockdown the prima facie case. All of the competent rebuttal evidence taken as a whole should be weighed against the evidence supporting the prima facie case. In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). Although the record may establish evidence of secondary considerations which are indicia of nonobviousness, the record may also establish such a strong case of obviousness that the objective evidence of nonobviousness is not sufficient to outweigh the evidence of obviousness. Newell Cos. v. Kenney Mfg. Co., 864 F.2d 757, 769, 9 USPQ2d 1417, 1427 (Fed. Cir. 1988), cert. denied, 493 U.S. 814 (1989); Richardson-Vicks, Inc., v. The Upjohn Co., 122 F.3d 1476, 1484, 44 USPQ2d 1181, 1187 (Fed. Cir. 1997) (showing of unexpected results and commercial success of claimed ibuprofen and psuedoephedrine combination in single tablet form, while supported by substantial evidence, held not to overcome strong prima facie case of obviousness).
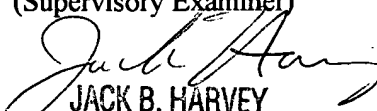
For the reasons above it is believed that the rejection should be maintained.

Respectfully submitted,

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